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NOTICE OF ALLOWANCE AND FEE(S) DUE

29989 7590 04/06/2009

HICKMAN PALERMO TRUONG & BECKER, LLP
2055 GATEWAY PLACE
SUITE 550
SAN JOSE, CA 95110

EXAMINER

SMARTH, GERALD A

ART UNIT

PAPER NUMBER

2446

DATE MAILED: 04/06/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/616,555

07/09/2003

Gargi Nalawade

50325-0758

2799

TITLE OF INVENTION: METHOD AND APPARATUS FOR ADVERTISING UPDATE MESSAGES TO PEERS AND PEER GROUPS IN A BORDER GATEWAY PROTOCOL PROCESS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	07/06/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
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or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

29989 7590 04/06/2009

HICKMAN PALERMO TRUONG & BECKER, LLP
2055 GATEWAY PLACE
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SAN JOSE, CA 95110

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/616,555 07/09/2003 Gargi Nalawade 50325-0758 2799

TITLE OF INVENTION: METHOD AND APPARATUS FOR ADVERTISING UPDATE MESSAGES TO PEERS AND PEER GROUPS IN A BORDER GATEWAY PROTOCOL PROCESS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1510 \$0 \$0 \$1510 07/06/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
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SMARTH, GERALD A 2446 709-230000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

SMARTH, GERALD A

ART UNIT

PAPER NUMBER

2446

DATE MAILED: 04/06/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1062 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1062 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/616,555	NALAWADE, GARGI	
	Examiner	Art Unit	
	GERALD SMARTH	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/25/09.
2. ☒ The allowed claim(s) is/are 1-10,12-20,22,32-32-41,43-47,49-51,63-78(Renumbered to be claims 1-54).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/Gerald Smarth/
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview and email with Chris Palermo on 3/22/09.

The application has been amended as follows:

In Specification: Paragraphs 26, 28, 32, and 39 are amended as set forth below:

AMENDMENTS TO THE SPECIFICATION

2. The amended specification will replace all prior versions of specification in the application.

[0026] FIG. 1 is a block diagram that illustrates a plurality of update messages 100, which include update messages 150, 155, 160. . . 185. In BGP network convergence, update messages 100 are generated, formatted and “advertised” (i.e., transmitted) to peer groups. An update message contains information regarding a network route, such as path attributes and network layer reachability information. The information is used by members of peer groups to facilitate efficient routing of packets in the network.

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[0028] FIG. 2 is a block diagram of system 200 which includes first plurality of update messages 250 associated with first peer entity 220, and second plurality of formatted update messages 260 associated with second peer group entity. As described above, a filtering mechanism determines the particular one of plural peer entities 210 to which each particular update message 105 is to be sent. In the example depicted in FIG. 2, update messages 155, 160, 175, 180 and 185 are associated with peer entity 220, and update messages 150, 165 and 170 are associated with second peer entity 230.

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[0032] FIG. 4 is a block diagram that illustrates a system 400 having formatted update messages 255-285 stored in first cache 370, which is associated with first peer entity 220. As shown in FIG. 4, each message that is intended for first peer entity 220 will be formatted and stored in first cache 370. In an embodiment, before any messages intended for second peer entity 230 are formatted, all update 255-285 that are intended for peer entity 220 will be formatted and stored in cache 370. In an embodiment, if a limit on a quantity of update messages to be formatted is reached, a number of formatted update messages will be enqueued to a queue associated with peer entity 220, thus freeing up space in cache 370 to store more formatted update messages. Or, in an embodiment, the formatting of update messages intended for the first peer entity 220 will be suspended, and BGP will format update messages intended for another peer entity 230. The formatting of update messages for first peer entity 220 may later be resumed.

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[0039] FIG. 7 is a flow chart that illustrates method 700 of advertising update messages to a plurality of peer entities. In step 705, a plurality of update messages intended to be advertised to one or more peer entities is received. Step 705 includes advertising all required update messages to a first peer entity. All update messages that are intended for a first peer entity are advertised to the first peer entity before any update messages are advertised to a second peer entity.

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REASONS FOR ALLOWANCE

3. The following is an examiner's statement of reasons for allowance: The prior art of record does not explain, nor suggests a method for advertising update message to peer groups in a border gateway protocol with the method of formatting updated messages by use of this particular queuing algorithm. Not all updates are sent to all peers. A routing map determines which peer groups will receive a particular updates. Prior to updates being sent they are all formatted for the particular peer entity so they will be able to receive these updates. There is a cache associated with every peer entity. Before any messages for a second peer are formatted, all updates messages are stored in a designated cache. If a limit on a quantity of updated messages to be formatted has been reached, a number of formatted update messages will be equeued to a queue associated with the particular peer. This will allow for up space in the cache. Updating messages for a first peer may be suspended and will format update messages intended for a second peer. The formatting of updated messages for the first peer will be continued at a later time. When a limit of formatted updated messages to the queue is met, the formatted updated messages from queue may be advertised to a designated peer, in the process freeing up queue space. If a limit is reached of formatted messages to a queue, then the intended enqueueing for that particular peer is suspended and will enqueue for another peer entity. The system is programmed to advertise formatted messages for the second peer after all the first peer messages has been advertised to the first peer or if the formatted updated messages for the first peer entity is below the programmed maximum quantity for formatted messages for the first peer

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entity are below programmed maximum quantity of enqueued messages. The ability to separate between formatting and enqueueing allows for all formatting to take place before replication and enqueueing takes place.

A checkpointing method is used to have a point of reference during the use of the tables. In checkpointing a point of reference in the table is maintained. All peer entities may be updated up to the checkpoint version of the table.

3. The closest art of record are Chen et al., Pouyoul et al., and Wong et al.

Chen, Pouyoul, nor Wong explain the method of separation between formatting and enqueueing before replication and advertising utilizing BGP to other peers as explained above.

4. For these reasons, in conjunction with all other limitations in this particular claim, puts this case in condition for allowance.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CORRESPONDANCE INFORMATION

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD SMARTH whose telephone number is

Art Unit: 2446

(571)270-1923. The examiner can normally be reached on Monday-Friday(7:30am-5:00pm)est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571)272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gerald Smarth/

Examiner, Art Unit 2446

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2446